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Conference Abstract

Testosterone as Diamine Oxidase Activity Regulator

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Abstract

Diamine oxidase (DAO) is a key enzyme of the metabolism of polyamines. Its activity was assayed in homogenate of male immature rat liver and kidney. The androgens are important regulators of polyamines' metabolism. It was known that testosterone (T) activates DAO in murine kidney, an effect that might depend on the intracellular level of polyamines. The aim of this research was to study the participation of androgen receptor and ornithine decarboxylase (ODC) in DAO testosterone regulation. The rats were treated i.p. 4 hours before measurements with T, T + Hydroxyflutamide (HF), an androgen receptor antagonist or T + difluoromethylornithine (DFMO), an inhibitor of ODC. It was observed that *i*) T significantly increased DAO activity of rat liver and kidney; *ii*) the presence of HF abolished the effect of T ; *iii*) the presence of DFMO slowly reduced the effect of T on DAO activity. It is concluded that T activates DAO mainly by a mechanism, which includes androgen receptor binding and ODC stimulation.

Keywords

poliamines, diamine oxidase, sex steroids

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Conflicts of interest

No